

REMARKS

Claims 1-4 and 11-18 are currently pending. By this Amendment, claims 1-4 are amended. Support for the amendments to claims 1-4 may be found in Figs. 7A, 7B, 19A, 19B, 26 and 27 and in the specification on page 17, line 1 through page 18, line 16, page 32, line 1 through page 35, line 5, and page 42, lines 4-23. No new matter is added. Reconsideration in view of the above-outlined amendments and the following remarks is respectfully requested.

Claims 1-4 and 11-18 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,654,543 to Ando et al. ("Ando") in view of U.S. Patent No. 5,630,006 to Hirayama et al. ("Hirayama"). This rejection is respectfully traversed.

The combination of Ando and Hirayama fails to disclose, teach or suggest the subject matter of amended claim 1. Amended claim 1 is directed to a multichannel recording device configured to record data on a disk-shaped recording medium that includes an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded. The multichannel recording device includes receiving means for simultaneously receiving a first program and a second program, which are different from each other. Both Ando and Hirayama fail to disclose this claimed feature. There is no disclosure of receiving programs in parallel. The recording device further includes encoding means for encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs. This feature is also absent in both Ando and Hirayama. The references do not disclose the parallel encoding of the programs. The recording device further includes recording means for alternately recording the object data, obtained by the encoding means and corresponding to the first and second programs, in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction. This claimed feature is also not disclosed by Ando and Hirayama. Ando and Hirayama fail to disclose the alternate recording of the object data corresponding to the first and second programs. The recording device further includes reproduction means for reproducing the object data which the recording means records in the object area and control means for recording the management data in the management area of the disk-shaped recording medium. The management data controls the reproduction means to reproduce the first and second programs in an order determined by channel numbers or recording start times.

Applicants respectfully submit that the combination of Ando and Hirayama does not render obvious the subject matter of amended claim 1. Claim 1 is allowable over Ando and Hirayama, either alone or in combination. Claims 11 and 15 depend from claim 1 and are allowable over the combination of Ando and Hirayama for at least the same reasons.

The combination of Ando and Hirayama fails to disclose, teach or suggest the subject matter of amended claim 2. Amended claim 2 is directed to a multichannel recording device configured to record data on a disk-shaped recording medium including an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded. The multichannel recording device includes receiving means for simultaneously receiving a first program and a second program, which are different from each other. Both Ando and Hirayama fail to disclose this claimed feature. There is no disclosure of receiving programs in parallel. The device further includes encoding means for encoding the first and second programs in parallel so as to obtain object data corresponding to the first and second programs. This feature is also absent in both Ando and Hirayama. The references do not disclose the parallel encoding of the programs. The recording device further includes recording means for alternately recording the object data, obtained by the encoding means and corresponding to the first and second programs, in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction. This feature is also lacking in Ando and Hirayama. Both Ando and Hirayama fail to disclose the alternate recording of the object data corresponding to the first and second programs. The recording device also includes reproduction means for reproducing the object data which the recording means records in the object area and control means for recording the management data in the management area of the disk-shaped recording medium. The management data controls the reproduction means to reproduce a requested program, where the requested program being one of the first or second programs.

Applicants respectfully submit that the combination of Ando and Hirayama does not render obvious the subject matter of amended claim 2. Claim 2 is allowable over Ando and Hirayama, either alone or in combination. Claims 12 and 16 depend from claim 2 and are allowable over the combination of Ando and Hirayama for at least the same reasons.

The combination of Ando and Hirayama fails to disclose, teach or suggest the method disclosed in amended claim 3. Amended claim 3 is directed to a multichannel recording method for recording data on a disk-shaped recording medium that includes an object area in

which object data corresponding to programs are recorded and a management area in which management data is recorded. The method includes simultaneously receiving a first program and a second program, which are different from each other. As discussed above in connection with claims 1 and 2, both Ando and Hirayama fail to disclose simultaneously receiving first and second programs. The first and second programs are encoded in parallel so as to obtain object data corresponding to the first and second programs. Again, Ando and Hirayama fail to disclose the parallel encoding of the programs to obtain object data. The object data obtained by the encoding of the first and second programs is alternately recorded in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction. Neither Ando nor Hirayama disclose alternately recording the object data from the first and second programs in the object area of the recording medium. The object data recorded in the object area is reproduced. The recording of the management data in the management area of the disk-shaped recording medium is controlled in which the management data controls the reproduction of the first and second programs in an order determined by channel numbers or recording start times.

Applicants respectfully submit that the combination of Ando and Hirayama does not render obvious the subject matter of amended claim 3. Claim 3 is allowable over Ando and Hirayama, either alone or in combination. Claims 13 and 17 depend from claim 3 and are allowable over the combination of Ando and Hirayama for at least the same reasons.

The combination of Ando and Hirayama fails to disclose, teach or suggest the method of amended claim 4. Amended claim 4 is directed to a multichannel recording method for recording data on a disk-shaped recording medium that includes an object area in which object data corresponding to programs are recorded and a management area in which management data is recorded. The method includes simultaneously receiving a first program and a second program, which are different from each other. As discussed above in connection with claims 1, 2 and 3, this feature is not disclosed by either Ando or Hirayama. The first and second programs are encoded in parallel so as to obtain object data corresponding to the first and second programs. This feature is also missing. The references do not disclose parallel encoding to obtain object data. The object data obtained by the encoding of the first and second programs is alternately recorded in the object area of the disk-shaped recording medium such that the object data are recorded based on a data length that enables continuous data reproduction. The combination of Ando and Hirayama does not

disclose the alternate recording of the object data in the object area of the disk-shaped recording medium. The object data recorded is reproduced in the object area. The recording of the management data in the management area of the disk-shaped recording medium is controlled wherein the management data controls the reproduction of a requested program, the requested program being one of the first or second programs.


Applicants respectfully submit that the combination of Ando and Hirayama does not render obvious the method of amended claim 4. Claim 4 is allowable over Ando and Hirayama, either alone or in combination. Claims 14 and 18 depend from claim 4 and are allowable over the combination of Ando and Hirayama for at least the same reasons.

Reconsideration and withdrawal of the rejection based upon the combination of Ando and Hirayama are respectfully requested.

Applicants respectfully submit that claims define subject matter that is patentable over the prior art cited of record. It is respectfully submitted that the application is in condition for allowance. Should further issues require resolution prior to allowance, the Examiner is requested to telephone applicants' undersigned attorney at the number below. Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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